

**ATTACHMENT D - TOTAL MAXIMUM DAILY LOAD IMPLEMENTATION REQUIREMENTS****D1 INTRODUCTION**

This Attachment provides the implementation, compliance, and reporting requirements for the Department to comply with total maximum daily load (TMDL) requirements that the Department is identified as a responsible party. For each TMDL in which the Department is identified, Tables D-1, D-2, and D-3 list the impaired waterbody, TMDL pollutant, and implementation requirements. This Attachment includes the following:

- Technical requirements for best management practices (section D2),
- Reporting Requirements (sections D3 through D3.4.),
- TMDL Implementation Requirements (sections D5 through D5.14.) and
- Tables with TMDLs and corresponding compliance requirements (section D6).

Waste load allocations and compliance deadlines for the applicable existing TMDLs (as adopted in existing Regional Water Board basin plans) are provided in Attachment A (Fact Sheet), which is incorporated by reference into this Attachment.

**D2 DESIGN, CONSTRUCTION, AND MAINTENANCE OF BEST MANAGEMENT PRACTICES FOR TMDL POLLUTANT REDUCTION**

The Department shall comply with best management practices design, construction, and maintenance requirements in Attachment C of this Order, for compliance with TMDL requirements.

The Department shall maintain its inventory database of best management practices, as described in Attachment C of this Order. The inventory database shall be made available upon request by the State Water Board Executive Director or a Regional Water Board Executive Officer.

**D3 REPORTING REQUIREMENTS FOR TMDL COMPLIANCE**

- All TMDL compliance-related reports shall be uploaded to SMARTS. Uploaded reports shall have file names that are readily discernable by the general public, including the applicable reporting period followed by the report name. For example, the Annual TMDL Compliance Status Report shall have a filename such as "2021-2022\_AnnualTMDLCompliance Status Report."
- The reporting period for all TMDL-related compliance reports required under this Attachment is the state fiscal year of July 1 through June 30.
- Required reports include the Prioritized Inventory of Reaches, Annual TMDL Compliance Status Reports, the TMDL Compliance Plan, and Region-Specific Reports.

A tabulated list of reports required in this Attachment is provided in Attachment G of this Order.

**D3.1 Prioritized Inventory of Reaches by Pollutant Category**

The Department shall update its existing Prioritized Inventory of Reaches and submit the updated inventory within 12 months of the Adoption Date of this Order, as part of its TMDL Compliance Plan required in section D3.3 of this Attachment. The updated Prioritized Inventory of Reaches shall include the prioritization of all TMDLs the Department is required to comply with, including the following newly-implemented four TMDLs and other inventory updates: (1) Los Penasquitos Lagoon Sediment TMDL in the San Diego Region; (2) San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDLs in the Los Angeles Region; (3) Pescadero-Butano Watershed Fine Sediment TMDL in the San Francisco Bay Region; and (4) Petaluma River Bacteria TMDL in the San Francisco Bay Region.

Prior to consideration of approval, the State Water Board Executive Director will publicly notice and issue the updated Prioritized Inventory of Reaches for a 30-day public comment period, with a limited scope for public comments on the updated prioritization incorporating the four above TMDLs.

**D3.2 Annual TMDL Compliance Status Reports**

The Department must submit an annual TMDL Compliance Status Report applicable to the TMDLs listed in Tables D-1, D-2, and D-3 of this Attachment. On November 30 following the Effective of this Order, the Department shall submit the first Annual TMDL Compliance Status Report covering compliance achieved during the previous fiscal year of July 1 through June 30, and the compliance proposed during the forthcoming two fiscal years.

Thereafter, the Department shall submit the Annual TMDL Compliance Status Report by November 30 of each year, which shall cover the compliance achieved during the previous fiscal year, and the compliance proposed during the forthcoming two fiscal years.

The Annual TMDL Compliance Status Report shall include the following information for the TMDLs listed in Tables D-1, D-2, and D-3:

1. Proposed list of TMDL waste load and load allocations with which the Department has come into compliance, including documentation demonstrating compliance and any ongoing maintenance or other efforts necessary to sustain compliance.
2. Tabulated inventory and descriptive summary of TMDL compliance activities performed in the previous fiscal year by watershed. Compliance activities include all efforts to identify, plan, and implement TMDL compliance projects. The tabulated inventory shall include the status of planning, designing, permitting, contributions, and implementation of all TMDL projects. Compliance activities shall be described in detail and shall identify the activity location, impaired waterbody, best management practices, and TMDL pollutant. All TMDL work completed to date, work completed during the reporting period,

work anticipated in the next two reporting periods, obstacles, and unresolved issues of concern.

3. TMDL compliance activities planned for the forthcoming two fiscal years for each impaired watershed. Compliance activities shall be described in detail and shall identify the activity, location, best management practices, and watersheds. Compliance activities shall include all efforts to identify, plan, and implement TMDL compliance projects and monitoring efforts.
4. Results of ongoing assessments of the performance, effectiveness assessments, and adaptive management of a representative fraction of each type of Department-installed best management practices and control measure.
5. Tabulated list of cooperative agreements that includes the name of each agreement, signatories or major participating entities, the impaired waterbody, the waste load allocation/TMDL pollutant, project type (e.g., within the Department's right-of-way, outside the Department's right-of-way, monitoring, best management practices, etc.), and the applicable waste load allocation implementation requirement.
6. Descriptive summary and tabulated data of all cooperative agreements, including the status of planning, designing, permitting, contributions, and implementing all cooperative agreement projects.
7. For the San Francisco Bay Water Board polychlorinated biphenyl and mercury TMDLs, project status of best management practices and control shall be included, as required by section D5.8, below.
8. For the Santa Ana Water Board Lake Elsinore and Canyon Lakes nutrients TMDL, an annual status report on the in-lake nutrient reduction program must be included, as described in section D5.13, below.
9. Updates to the Pollutant Load Reduction Plan required by the Lahontan Water Board.
10. Delays affecting project implementation, including delays or cancellations due to environmental or permitting factors (e.g., California Coastal Commission, California Department of Fish and Wildlife, U.S. Army Corps of Engineers, local flood control agencies, local county, etc.) beyond the Department's control.
11. Copies of watershed implementation reports for cooperative agreements established to comply with this Attachment. These may be uploaded to SMARTS as separate attachments if each electronic filename includes the report date, name, and TMDL watershed.

**D3.3 TMDL Compliance Plan**

The Department shall develop, implement and update a TMDL Compliance Plan that provides the Department's long-term plan to comply with the TMDLs listed in Tables D-1, D-2, and D-3 of this Attachment. The Department shall submit its initially developed TMDL Compliance Plan within 12 months of the Adoption Date of this Order. The TMDL Compliance Plan shall cover the period from the Effective Date of this Order through the final TMDL compliance deadlines listed in Attachment A (and incorporated into this Order by reference).

The Department shall submit an updated TMDL Compliance Plan annually by November 30 of each year. The Department shall submit the TMDL Compliance Plan and subsequent annual updates for review and consideration of approval by the State Water Board Executive Director. Upon approval by the State Water Board Executive Director, the Department shall begin implementation.

The Department shall meet annually, by March 1 of each year, with the appropriate Regional Water Board Executive Officer or designee to discuss:

- Previous work completed under the previous Order 2012-0011-DWQ (as amended by Orders WQ 2014-0006-EXEC, WQ 2014-0077-DWQ, WQ 2015-0036-EXEC and WQ 2017-0026-EXEC) to compliance with the Department's TMDL waste load allocations in this Order; and
- Proposed work and active cooperative projects proposed to provide compliance with the Department's TMDL load allocations or waste load allocations.

The TMDL Compliance Plan and annual updates shall include the following:

1. A technical discussion that describes the proposed translation from previously earned compliance units under the previous Order 2012-0011-DWQ (as amended by Orders WQ 2014-0006-EXEC, WQ 2014-0077-DWQ, WQ 2015-0036-EXEC and WQ 2017-0026-EXEC) to compliance with TMDL waste load allocations in this Order.
2. A technical discussion that describes how the updated Prioritized Inventory of Reaches is reflected in the TMDL Compliance Plan.
3. A strategy for implementing Regional Water Board-specific requirements.
4. A summary of cooperative agreement projects that will be implemented.
5. A schedule for completing interim and final milestones for each of the TMDLs listed in the Time Schedule Order.
6. A spreadsheet of tabulated data containing the following information:
  - TMDL name,
  - Reach name,
  - Individual pollutant,

- Proposed compliance strategy,
  - Total watershed acres,
  - Department's acres in the watershed,
  - The Department's percentage of right-of-way in the watershed, and
  - TMDL waste load allocations applicable to the Department.
7. Electronic geographic information system data files including location and information on the following:
- TMDL watersheds,
  - Pollutants, and
  - Location and type of best management practices.
8. A proposed implementation schedule for each TMDL waterbody-pollutant combination, with the anticipated start and completion date for implementation of each TMDL.
9. A tabulated list and accompanying description of the TMDL watersheds and the locations and type of best management practices, cooperative agreements, and controls.
10. A tabulated list and accompanying description of the Department's compliance strategy to achieve compliance with each TMDL. One or more of the following compliance strategies shall be identified for each TMDL:
- a. *Modeling Analysis*. Modeling analysis, including analysis of cooperative projects, demonstrates that best management practices reduce pollutant loads to comply with TMDL waste load allocations;
  - b. *Receiving Water Quality Monitoring*. Receiving water analysis demonstrates compliance with the TMDL allocations at the point of the Department's discharge or as determined by monitoring immediately upstream and downstream of the Department's discharge location;
  - c. *Loads from Other Sources*. Analytical results demonstrate that exceedances of the receiving water limits are due to loads from other sources and that the Department's pollutant loads are not causing or contributing to the exceedances;
  - d. *Discharge Sampling*. Analytical results demonstrate that the Department's discharge complies with a concentration-based waste load allocation;
  - e. *Mass-Based Waste Load*. Analytical results demonstrate that the Department's discharge complies with the individual or joint allocation or the percent reduction where a mass-based waste load has been allocated individually, jointly to a group, or is expressed as a percent reduction in load;

- f. *Allowable Exceedance Days*. Discharge conforms to the allowable exceedance days where a waste load allocation is expressed as the number of allowable exceedance days;
  - g. *No Discharge*. No discharges occurred during the relevant period either directly or indirectly from the Department's right-of-way to the waterbody; or
11. The compliance strategy options selected for the North Coast, San Francisco Bay, Los Angeles, Lahontan, Santa Ana, and San Diego Water Boards, as described in sections D5.7, D5.8, D5.10, D5.11, D5.12, D5.13, and D5.14 of this Attachment.
  12. The Inventory and Assessment Report with the drainage infrastructure condition for all Department facilities in the San Lorenzo River Watershed, as required by the Central Coast Water Board TMDL. The Inventory and Assessment Report shall include a schedule for completing necessary upgrades to the drainage infrastructure. See section D5.3, below.

#### **D3.4 Regional Water Board-Specific Reports**

The Department shall submit Regional Water Board-Specific Reports for review and consideration of approval by the State Water Board Executive Director in consultation with the appropriate Regional Water Board Executive Officer. The Department shall submit the following Regional Water Board-Specific Reports by the indicated due dates:

1. Lahontan Water Board. By March 15, 2022, the Department shall submit an updated Pollutant Load Reduction Plan for review and consideration of approval to the Lahontan Water Board Executive Officer. See section D5.12 of this Attachment.
2. Cooperative Projects. Prior to implementation of projects pursuant to cooperative agreements or other agreement (e.g., regional, task force, local, watershed, and Regional Water Board agreements), the Department shall submit its selected project for review and consideration of approval to the applicable Regional Water Board Executive Officer.
3. North Coast Water Board Sediment and Load Reduction Projects. State Water Board Executive Director in consultation with North Coast Water Board Executive Officer shall determine the Department's progress towards compliance with sediment and temperature load reductions in the North Coast Water Board region. For review and consideration of approval, the Department shall provide the following documentation:
  - For projects completed from the TMDL adoption date through this Order's adoption date, the Department shall provide the load reductions for any completed TMDL sediment or temperature load reduction projects.



- For projects completed under pre-approval by the Regional Water Board Executive Officer and after this Order's adoption date, the Department shall provide the load reduction for any sediment load reduction project or activity at the time of completion (if in the Department right-of-way) or upon contribution to the implementing entity (if outside the Department right-of-way).

#### **D4 OTHER FACTORS AFFECTING PROJECT IMPLEMENTATION**

The Department shall identify other factors (such as safety concerns, technical infeasibility, and conflicting local permits) that may affect TMDL compliance project implementation. The Department shall include factors affecting TMDL compliance project implementation in its TMDL Compliance Plan, and subsequent TMDL Compliance Plan updates.

#### **D5 IMPLEMENTATION REQUIREMENTS BY POLLUTANT CATEGORY**

The Department shall implement the requirements in sections D5.1 through D5.14, below, for the waterbody-pollutant combination that are listed in Tables D-2 and D-3.

##### **D5.1 Cooperative Agreements**

Subject to written approval by the Regional Water Board's Executive Officer and the Deputy Director of the Division of Water Quality, the Department may satisfy some or all of the Department's TMDL obligations through projects outside of the Department's right-of-way, provided that the projects, in combination with other dischargers' projects in the watershed, are consistent with attaining the waste load allocations for the watershed. Where the Department enters into a Cooperative Agreement, the allocation of the resulting waste load reductions between the Department and the cooperating agencies should be proposed as part of the Cooperative Agreement and shall be documented in the TMDL Compliance Plan.

##### **D5.2 Performance, Effectiveness, and Adaptive Management Assessment**

The Department shall conduct ongoing assessments of the performance and effectiveness of a representative fraction of each type of Department-installed best management practices and control measures. The assessment shall include necessary modifications to achieve and maintain waste load allocations and best management practices performance standards. Where an assessment indicates that best management practices and/or control measures are inadequate to achieve waste load allocations and other performance standards, the Department shall implement adaptive management, which are modifications and improvement of control measures and best management practices necessary for compliance all TMDL-related requirements.

**D5.3 Requirements for Sediment/Nutrients/Mercury/Siltation/Turbidity Total Maximum Daily Loads**

The Department shall control sediment discharge. Sediment in stormwater runoff from slopes adjacent to paved roads, hydromodification, induced landslides, and mass wasting events are sources of silt, turbidity, nutrients, and mercury in surface water. The Department shall implement best management practices to prevent or minimize erosion and sediment discharge, including preventing channel incision and bank erosion; protecting and vegetating hillsides; intercepting, filtering, or infiltrating runoff; avoiding concentrated flows in natural channels and drains; and avoiding modification of natural runoff flow patterns. The Department shall implement best management practices for spoils management and disposal to prevent runoff from contacting spoils and subsequently discharging such runoff to stormwater conveyance systems. The Department shall control discharges from all construction sites (regardless of the size) that drain to TMDL receiving waters and shall ensure that controls are equivalent to the requirements in the Construction General Permit.

For the San Lorenzo River watershed, the Department shall complete an inventory and assessment of the condition of drainage infrastructure for all its facilities. The Department shall submit an Inventory and Assessment Report to the State Water Board Executive Director and the Central Coast Water Board Executive Officer within 12 months of the Effective Date of this Order. The Inventory and Assessment Report shall include a schedule for completing necessary upgrades to the drainage infrastructure of its facilities.

**D5.4 Requirements for Toxic Pollutants/Pesticides/Metals Total Maximum Daily Loads**

Toxic pollutants, pesticides, and metals may adhere to sediment in stormwater. The Department shall control toxic pollutants, pesticides, and total and dissolved metals in stormwater discharges. Toxic pollutants include polychlorinated biphenyls, polyaromatic hydrocarbons, chlordane, dichlorodiphenyltrichloroethane, dieldrin, lead, mercury, nickel, selenium, zinc, cadmium, chromium, and copper.

The Department shall implement best management practices designed to prevent the discharge of sediment, including best management practices that protect hillsides from erosion, provide runoff interception and filtration, avoid concentrated flows in natural channels and drains, and avoid modification of natural runoff flow patterns.

For dissolved fraction metals, the Department shall prioritize best management practices to reduce the discharge of dissolved fraction metals in stormwater, such as preventing contaminated runoff from reaching receiving waters or by installing infiltration systems that allow runoff water to percolate into soil. Other best management practices include adsorption, filter media, precipitation, and ion



exchange. The Department may discharge to sewer if such discharge is approved by the wastewater treatment facility.

#### **D5.5 Requirements for Bacteria Total Maximum Daily Loads**

The Department shall implement, monitor, and maintain best management practices to minimize the discharge of bacteria (i.e., fecal pathogens) to surface waters within each applicable reach. Potential sources of bacteria include stormwater runoff from untreated human and pet wastes, which may occur at homeless encampments and other areas. The Department shall implement one or more of the following:

1. The Department's Homeless Encampment Policy (Chapter 1, section 1.07.3(B) of Department's Maintenance Manual) or subsequent policies addressing encampment removal and cleanup.
2. Cooperative agreement participation, such as leases to local municipalities for homeless services, where available.
3. Structural best management practices, such as retention, detention, diversion, infiltration, filtration, vegetated treatment, and similar.

#### **D5.6 Requirements for Temperature Total Maximum Daily Loads**

Sediment may increase surface water temperatures. The Department shall implement sedimentation and erosion control measures, such as protecting hillsides from erosion, intercepting, and filtering or infiltrating runoff, avoiding concentrated flows in natural channels and drains, and avoiding modification of natural runoff flow patterns. Because vegetation removal may also increase surface water temperatures, the Department shall:

1. Preserve existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases;
2. Provide effective shade near receiving waters susceptible to temperature increases;
3. Maintain site potential effective shade near receiving waters susceptible to temperature increases; and
4. Receive written authorization by the applicable Regional Water Board Executive Officer prior to conducting activities where alteration of riparian biotic conditions may increase sedimentation or reduce effective shade.

#### **D5.7 North Coast Water Board Sediment and Temperature Total Maximum Daily Loads**

Within the jurisdiction of the North Coast Regional Water Board, the Department shall implement the actions below for sediment and temperature controls. The

Department may use cooperative agreements, Department-specific implementation, or a combination to meet the implementation requirements. The Department-specific sediment load allocations are provided in the table, below:

**Department-Specific Sediment Load Allocations in the North Coast Water Board Region**

<b>TMDL Name</b>	<b>Existing Load (tons/year)</b>	<b>Load Allocation (tons/year)</b>	<b>Reduction Needed (%)</b>	<b>Sediment Load Reduction (tons/year)</b>
Albion River	7	2	74	5
Big River	193	44	77	149
Eel River, Upper Main	137	68	50	68
Eel River, Middle Fork	147	105	28	41
Eel River, Lower Main	354	74	79	280
Eel River, South Fork	18,027	4,871	73	13,157
Garcia River	251	100	60	150
Gualala River	171	21	88	150
Mad River	6,811	770	89	6,042
Navarro River	2,868	1,364	52	1,504
Noyo River	116	33	71	83
Redwood Creek	5,337	856	84	4,481
Scott River	153	67	57	87
Ten Mile River	5	1	76	4
Trinity River	10,254	2,461	76	7,793
Trinity River, South Fork	1,983	358	82	1,625
Van Duzen River	447	68	85	379

**D5.7.1 Load Reductions**

The Department shall implement TMDL best management practices and control projects to reduce pollutant loads associated with Department roads within each sediment and temperature impaired watershed. The amount of load reduction in each watershed shall be commensurate with the length and area of Department right-of-way in each watershed (i.e., proportional responsibility). The Department shall coordinate closely with the North Coast Water Board to implement TMDL compliance projects that reduces sediment and temperature loads described in sections D5.7.1.1 and D5.7.1.2, below.

**D5.7.1.1 Sediment Load Reductions**

The Department shall control sediment loads in each TMDL watershed by implementing TMDL best management practices and controls that reduce sediment discharges and/or restore assimilative capacity to streams. The amount of sediment load reduction (in tons of sediment per year) that shall be reduced in each TMDL watershed is shown in Table A2 of Attachment A to this Order.

**D5.7.1.2 Temperature Load Reductions**

The Department shall reduce temperature loads in each TMDL watershed by implementing TMDL best management practices and control projects that increase effective shade to streams. Increasing effective shade to streams shall be accomplished through restoration of riparian acreage via TMDL best management practices and control projects. The riparian acreage to be restored is equal to the roadway area within the riparian setback. The riparian setback was determined by the North Coast Water Board by creating a 200-foot buffer width along each side of United States Geological Survey mapped blue-line streams. The acres of riparian restoration that shall be implemented in each TMDL watershed are provided below.

**Department's Proportional Responsibility of Riparian Shade**

<b>Watershed</b>	<b>Area of Department Highways in the Watershed (acres)</b>	<b>Department's Proportional Responsibility of Riparian Shade (acres)</b>
Eel River, Lower Hydrologic Area	456	37
Eel River, Middle Fork	57	17
Eel River, South Fork	748	143
Eel River, Upper Main	255	127
Klamath River	166	61
Navarro River	166	61
Scott River	163	28
Shasta River	869	131

**D5.8 San Francisco Bay Water Board Mercury and Polychlorinated Biphenyls Total Maximum Daily Loads**

For the San Francisco Bay Water Board mercury and polychlorinated biphenyls TMDLs, the Department shall implement the monitoring requirements in Attachment F and the best management practices described below.

The Department shall implement mercury and polychlorinated biphenyl best management practices in 2,970 acres of right-of-way which are located within the San Francisco Bay Water Board region. Both polychlorinated biphenyl and mercury are satisfied by treating the 2,970 acres. Polychlorinated biphenyls are

further targeted through the choice of treatment locations, which is explained in Attachment A (the Fact Sheet).

The Department shall submit the following information in the TMDL Compliance Plan and updates:

1. Caulk Removal for Polychlorinated Biphenyls. With the TMDL Compliance Plan, the Department shall submit standard operating procedure (similar to that used for the 2018 demolition of the old eastern span of San Francisco Bay Bridge) to identify, remove and properly dispose of polychlorinated biphenyl-containing caulk prior to or during the demolition, replacement, or rehabilitation of existing roadways, bridges, or other structures in the right-of-way containing such material. These standard operating procedures shall be described in the TMDL Compliance Plan and implemented for all projects no later than the date of submittal of the TMDL Compliance Plan.
2. Polychlorinated Biphenyls and Mercury TMDL Compliance Plan. The Department shall submit its plan for polychlorinated biphenyls and mercury treatment controls in the TMDL Compliance Plan, which is described in section D3.3, above. For polychlorinated biphenyls, this plan shall cover the reporting period from the Adoption Date of this Order through March 29, 2030. The plan shall include the following information:
  - a. A schedule for planned implementation of control measures to treat 2,970 acres by March 29, 2030. The schedule and updates to the schedule shall include the watershed, type of best management practice, installation date, and location by coordinates for controls planned in the following five years. .
  - b. Identify the watersheds where polychlorinated biphenyls and mercury best management practices are currently being implemented, the acres, and the type of best management practices.
  - c. Describe the watersheds where polychlorinated biphenyls and mercury best management practices will be implemented, the date of planned implementation, and the acres that will be treated with the best management practices. Identify the type of best management practices that will be used at each location.
  - d. Identify the selected best management practices option for each location by choosing and reporting on one of the following options:
    - i. Implement best management practices within the Department's right-of-way; or
    - ii. Implement best management practices in areas managed by municipalities, local agencies, or private entities to which runoff from the Department's rights-of-way is discharged. Treatment controls implemented in old urban and industrial areas within municipalities will

that are three times the acres of the Department's rights-of-way that is discharging to areas outside the right of way. Old urban land use describes urbanized areas developed by 1974 according to the Interim Accounting Methodology published by the Bay Area Stormwater Management Agencies Association in 2017; or

- iii. Implement best management practices that are a combination of items d.i and d.ii, above.

#### **D5.9 Requirements for Los Angeles Water Board Trash Total Maximum Daily Loads**

The Department shall comply with ten trash TMDLs in the Los Angeles Water Board's jurisdiction, as follows: Los Angeles Area Lakes, Peck Road Park Lake; Los Angeles Area Lakes, Echo Park Lake; Ballona Creek; Los Angeles Area Lakes, Legg Lake; Los Angeles River; Machado Lake; Malibu Creek Watershed; Revolon Slough and Beardsley Wash; Santa Monica Bay Nearshore and Offshore; and Ventura River Estuary. For these TMDLs, the Department shall implement the following:

1. Trash Control Measures. To achieve the trash reduction allocations provided in the tables, below, the Department shall install certified full capture systems that are designed to trap all particles that are 5 millimeter or greater and are sized to have a design treatment capacity that is not less than the peak flow rate resulting from a one-year, one-hour storm.
2. Trash Reduction Allocations. Trash reduction allocations are the gallons per year of trash that the Department shall remove or reduce from discharges from its jurisdiction to satisfy its trash load allocations. Areas within the Department's jurisdiction include highway on- and off-ramps in high density residential, commercial, and industrial land uses, rest areas and park-and-rides, state highways in commercial and industrial land uses, and mainline highway segments.

#### **Trash TMDL Reduction Allocations**

<b>Trash TMDL</b>	<b>Reduction Allocations (gallons per year)</b>
Ballona Creek	1,222
Los Angeles Area Lakes, Echo Park Lake	150
Los Angeles Area Lakes, Legg Lake	586.92
Los Angeles River	59,421
Machado Lake	4,215.84
Malibu Creek Watershed	10,813
Los Angeles Area Lakes, Peck Road Park Lake	950

Trash TMDL	Reduction Allocations (gallons per year)
Revolon Slough and Beardsley Wash	11,215.45
Santa Monica Bay Nearshore and Offshore	36,129
Ventura River Estuary	2,049.86

#### **D5.10 Requirements for Los Angeles Water Board Other Total Maximum Daily Loads**

For the Los Angeles Water Board region, the Department shall comply with the monitoring requirements in Attachment F and the implementation requirements provided below:

The Department shall comply with best management practices implementation requirements through selection of one of the following options:

1. The Department shall participate, or continue to participate, in cooperative agreement projects with other entities and agencies, which contribute to the construction and maintenance of regional structural best management practices projects that will treat applicable TMDL pollutants from the Department's right of way for compliance with wasteload allocations; or
2. The Department shall implement best management practices in its right-of-way to meet the TMDL allocations; or
3. The Department may implement a combination of items 1 or 2, above, provided that the Department complies with the relevant TMDL.

#### **D5.11 Requirements for Central Valley Water Board Total Maximum Daily Loads**

##### ***D5.11.1 Mercury for Cache Creek Watershed***

For the Cache Creek watershed Mercury TMDL that includes Harley Gulch, Sulphur Creek, Cache Creek, and Bear Creek, the Department shall control sediment as required by the TMDL, as follows:

1. Control erosion from construction and maintenance activities using approved best management practices in the parts of the watershed identified above;
2. Comply with the Department's Stormwater Management Plan and implement best management practices to control erosion; and
3. Perform pre-project assessments to identify areas with enriched mercury. Identify and implement additional best management practices for these areas.



**D5.11.2 Sacramento-San Joaquin Delta Methylmercury TMDL**

For the Sacramento-San Joaquin Delta Methylmercury TMDL, the Department shall provide the compliance status, plans, reports, and implementation via the Annual TMDL Compliance Status and TMDL Compliance Plan described in sections D3.2 – D3.3, above. Monitoring requirements are provided in Attachment F.

Where the Department's separate storm sewer system is located within a Delta subarea and interconnected with the jurisdiction of a municipal separate storm sewer system listed in the table below, the waste load allocation for that municipal separate storm sewer system also applies to the Department. As needed, the Department shall work with the municipal separate storm sewer system agency toward attainment of that assigned waste load allocation. Information in this table is from the Basin Plan for the Sacramento River Basin and the San Joaquin Basin, Fifth Edition, Table 4-17.

**Urban Runoff Methylmercury Waste Load Allocations by Jurisdictional Municipal Separate Storm Sewer System**

<b>Jurisdictional Municipal Separate Storm Sewer System Permittee by Subarea</b>	<b>Permit No.</b>	<b>Waste Load Allocation (grams per year)</b>
<b>Central Delta</b>		
Contra Costa (County of)	CAS083313	0.75
Lodi (City of)	CAS000004	0.053
Port of Stockton MS4	CAS084077	0.39
San Joaquin (County of)	CAS000004	0.57
Stockton Area MS4	CAS083470	3.6
<b>Marsh Creek</b>		
Contra Costa (County of)	CAS083313	0.3
<b>Mokelumne River</b>		
San Joaquin (County of)	CAS000004	0.016
<b>Sacramento River</b>		
Rio Vista (City of)	CAS000004	0.0078
Sacramento Area MS4	CAS082597	1
San Joaquin (County of)	CAS000004	0.11
Solano (County of)	CAS000004	0.041
West Sacramento (City of)	CAS000004	0.36
Yolo (County of)	CAS000004	0.041
<b>San Joaquin River</b>		
Lathrop (City of)	CAS000004	0.097
Port of Stockton MS4	CAS084077	0.0036
San Joaquin (County of)	CAS000004	0.79
Stockton Area MS4	CAS083470	0.18

<b>Jurisdictional Municipal Separate Storm Sewer System Permittee by Subarea</b>	<b>Permit No.</b>	<b>Waste Load Allocation (grams per year)</b>
Tracy (City of)	CAS000004	0.65
<b>West Delta</b>		
Contra Costa (County of)	CAS083313	3.2
<b>Yolo Bypass</b>		
Solano (County of)	CAS000004	0.021
West Sacramento (City of)	CAS000004	0.28
Yolo (County of)	CAS000004	0.083

Where the Department's storm sewer system is located within a Delta subarea but outside the jurisdiction of a municipal separate storm sewer system listed in the above table, the Department shall comply with the urban runoff load allocations for each Delta subarea shown in the table below. Information in the below table is from the Basin Plan for the Sacramento River Basin and the San Joaquin Basin, Fifth Edition (Table 4-15).

**Department-specific Urban Runoff Methylmercury Load Allocations:  
Applicable in Storm Sewer System Discharges Located Within a Delta  
Subarea but Outside the Jurisdiction of a Municipal Separate Storm Sewer  
System**

<b>Delta Subarea</b>	<b>Current Load (grams per year)</b>	<b>Allocation (grams per year)</b>
Central Delta	0.14	0.14
Marsh Creek	---	---
MokelumneRiver	0.018	0.018
SacramentoRiver	0.62	0.62
San JoaquinRiver	0.0022	0.0022
West Delta	0.066	0.066
Yolo Bypass	---	---

**D5.11.3 Nutrients in Clear Lake**

The Department is assigned a phosphorous waste load allocation of 100 kilograms per year in the Clear Lake Nutrients TMDL, which is managed by controlling sediment. For the Clear Lake Nutrients TMDL, the Department shall control sediment, as follows:

1. Control erosion from construction and maintenance activities using approved best management practices in the parts of the watershed identified above; and
2. Comply with the Department's Stormwater Management Plan. and implement best management practices to control erosion for existing and all new Department projects.

**D5.12 Requirements for Lahontan Water Board Lake Tahoe Sediment and Nutrients Total Maximum Daily Loads**

Monitoring shall be implemented and reported according to the requirements in Attachment F of this Order. The Department shall implement the sediment and nutrient reduction requirements, and corresponding final compliance dates, specified in the TMDL for Sediment and Nutrients in Lake Tahoe, as follows:

***D5.12.1 Pollutant Load Reduction***

The Department shall plan, implement, and report the following for pollutant load reduction:

1. Measure pollutant load reductions in accordance with the processes outlined in the most recent version of Lake Clarity Crediting Program Handbook (<https://clarity.laketahoeinfo.org/Home/UrbanJurisdictions>), the Lake Tahoe Info Stormwater Tools (<https://stormwater.laketahoeinfo.org>), and in accordance with the program priorities and direction formalized in the most current Decisions Record Memo.
2. Reduce fine sediment particle, total phosphorus, and total nitrogen loads by 21, 14, and 14 percent, respectively, by September 30, 2021 (end of water year 2021). No later than January 15, 2022, the Department shall input data supporting pollutant load reductions to the online crediting platform (i.e., the Stormwater Tools at the link <https://stormwater.laketahoeinfo.org>).
3. Reduce fine sediment particle, total phosphorus, and total nitrogen loads by 34, 21, and 19 percent, respectively, by September 30, 2026 (end of water year 2026). No later than January 15, 2027, the Department shall input data supporting pollutant load reductions to the online crediting platform (i.e., the Stormwater Tools at the link <https://stormwater.laketahoeinfo.org>).
4. Reduce fine sediment particle, total phosphorus, and total nitrogen loads by 38, 23, and 22 percent, respectively, by September 30, 2031 (end of water year 2031). No later than January 15, 2032, the Department shall input data supporting pollutant load reductions to the online crediting platform (i.e., the Stormwater Tools at the link <https://stormwater.laketahoeinfo.org>).

***D5.12.2 Pollutant Load Reduction Plan***

The Pollutant Load Reduction Plan is a Region-Specific Report, as listed in section D3.4, above. By March 15, 2022, the Department shall submit an updated Pollutant Load Reduction Plan that describes how it will achieve the pollutant load reduction requirements for the third five-year TMDL implementation period, defined as the fifteen-year load reduction milestone in the Lake Tahoe TMDL. The updated Pollutant Load Reduction Plan shall demonstrate how the Department will reduce

baseline fine sediment particle, total nitrogen, and total phosphorus loads by 34, 21, and 19 percent, respectively, by September 30, 2026 (end of water year 2026). The Department shall submit the updated Pollutant Load Reduction Plan for review and consideration of approval to the State Water Board Executive Director in consultation with the Lahontan Water Board Executive Officer. The approved Pollutant Load Reduction Plan shall be implemented. The updated plan shall include, at a minimum, the following elements:

1. The Pollutant Load Reduction Plan shall include the Department's previously approved Baseline Load Estimate.
2. The Pollutant Load Reduction Plan shall include a list of catchments (i.e., Catchment Registration Schedule) that the Department plans to register pursuant to the approved Lake Clarity Crediting Program to comply with load reduction requirements. The list shall include catchments where projects will be constructed, and other load reduction activities (capital improvements, institutional controls, and other measures/practices implement) will be taken to achieve pollutant load reduction requirements.
3. The Pollutant Load Reduction Plan shall describe stormwater program activities to reduce fine sediment particle, total phosphorus, and total nitrogen loading that the Department will implement in identified catchments.
4. A pollutant load reduction analyses shall be conducted on a representative catchment subset to demonstrate that proposed implementation actions are expected to achieve the pollutant load reduction requirements. For representative catchments, the analysis shall include detailed estimates of both baseline pollutant loading and expected pollutant loading resulting from implementation actions and provide justification why the conducted load reduction analysis is adequate for extrapolation to other catchments. The pollutant loading estimates shall differentiate between estimates of pollutant load reductions achieved since May 1, 2004 and pollutant load reductions from actions not yet taken.
5. The Pollutant Load Reduction Plan shall describe a schedule for achieving the pollutant load reduction requirements described in the Lake Tahoe Sediment TMDL. The schedule shall include an estimate of expected pollutant load reductions for each year of this Order term based on preliminary numeric modeling results. The schedule shall also describe which catchments the Department anticipates it will register for each year of this Order.
6. The Pollutant Load Reduction Plan shall include a description of the processes and procedures to annually assess stormwater management activities and associated load reduction progress. The plan shall describe how the Department will use information from monitoring and implementation or other

efforts to improve operational effectiveness and for achieving the pollutant load reduction requirements.

7. The monitoring sampling, analysis, and reporting shall be implemented according to Attachment F of this Order.
8. The percent load reductions for each of the established five-year milestones is provided in the following two tables:

**Lake Tahoe Fine Sediment Particles, Nitrogen, and Phosphorus**

Description	Fine Sediment Particles	Nitrogen	Phosphorous
<b>Basin-Wide Load</b>	3.50E+20	63	18
<b>% of Basin-Wide Load</b>	72	18	47
<b>Units</b>	Particles per year	Metric ton per year	Metric ton per year

**Lake Tahoe Percent Load Reductions by Five-Year Milestones**

Milestone Year	Milestone Load Reductions (%)	Milestone Load Reductions (%)	Milestone Load Reductions (%)
10	21	14	14
15	34	19	21
20	38	22	23
25	41	25	26
30	45	38	26
35	48	31	31
40	52	34	33
45	55	37	36
50	59	40	38
55	62	43	41
60	66	46	44
65	71	50	46

Information provided in the Lake Tahoe Percent Load Reduction by Five Year Milestones table, above, was obtained from the Lahontan Water Board Resolution R6T-2010-0050 that was adopted August 16, 2011.

**D5.13 Requirements for Santa Ana Water Board, Lake Elsinore and Canyon Lake Nutrient Total Maximum Daily Load**

For the Lake Elsinore and Canyon Lake Nutrient TMDL, the Department shall implement monitoring according to the requirements in Attachment F of this Order.

The Department shall comply with the Lake Elsinore and Canyon Lake Nutrient TMDL by implementing one of the compliance options described below. The Department shall report its selected option in the TMDL Compliance Plan:

1. Continue participation with the Lake Elsinore and Canyon Lake Nutrients TMDL Task Force commitment for cooperative implementation actions, monitoring, and special studies. The Department shall remain an active member of the Lake Elsinore and Canyon Lake Nutrients TMDL Task Force; or
2. If the State Water Board receives notice that the Department is not fulfilling its obligations to the Lake Elsinore Canyon Lake TMDL Task Force, the Department must develop and implement a program consistent with the Lake Elsinore and Canyon Lake TMDL Task force through completion of the following tasks:
  - a. Conduct Canyon Lake in-lake monitoring consistent with the TMDL Task Force monitoring program;
  - b. Submit a proposed facility monitoring program to evaluate nutrient discharges from the Department's facilities in the Lake Elsinore and Canyon Lake watershed;
  - c. Develop and implement a Lake Elsinore in-lake sediment nutrient reduction program to mitigate Department facilities in-lake nutrient sediment load;
  - d. Develop and implement a monitoring program to evaluate the success of in-lake sediment reduction strategies that will be implemented;
  - e. Develop and implement a Canyon Lake in-lake sediment nutrient reduction program to mitigate Department facilities in-lake nutrient sediment load;
  - f. Develop and implement a monitoring program to evaluate the success of in-lake sediment reduction strategies that will be implemented;
  - g. Submit an annual monitoring results report by November 30 of each year; and,
  - h. Submit an annual Lake Elsinore in-lake nutrient reduction program status report with the Annual TMDL Compliance Report, as required in section D3.2 of Attachment D of this Order.

#### **D5.14 Requirements for San Diego Water Board Total Maximum Daily Loads**

##### ***D5.14.1 Project I – Twenty Beaches and Creeks Bacteria***

For the Project I–Twenty Beaches and Creeks TMDL, the Department shall implement the TMDL bacteria monitoring requirements in Attachment F of this Order.



*D5.14.2 Chollas Creek Dissolved Copper, Lead, and Zinc*

The Chollas Creek Dissolved Copper, Lead, and Zinc TMDLs require the Department to implement and maintain best management practices, to monitor, and to report. The dissolved copper, lead, and zinc TMDLs for Chollas Creek are summarized in section A9.7.5.4 of Attachment A of this Order.

1. Monitoring shall be implemented and reported according to the requirements in Attachment F of this Order.
2. The Department shall plan, implement, and report on one of the following options:
  - a. Cooperative Agreements. Implement best management practices through cooperative agreements within areas managed by municipalities, local agencies, or private entities to which runoff from Department rights-of-ways is discharged. Best management practices implemented through cooperative agreements shall treat TMDL-pollutants from the Department rights-of-way to comply with the Department's waste load allocations by the interim and final compliance dates; or
  - b. Department-Specific. Include a plan and schedule in the TMDL Compliance Plan that identifies (1) the existing acreage treated within the Department's right of way with existing best management practices and (2) the proposed total acreage within the Department's right of way that will be treated with effective best management practices to comply with the Department's waste load allocations by the final compliance date. Best management practices shall meet the waste load allocations by the interim and final compliance dates; or
  - c. Combination. Utilize a combination of methods in sections 2.a and 2.b, above.
3. Chollas Creek Reporting. The Department shall report the status of best practices implementation including: (i) current and proposed best management practices and treatment acres implemented through cooperative agreements; (ii) existing acreage treated with existing Department-specific best management practices; (iii) proposed Department-specific best management practices and acreage to be treated for the upcoming year; and (iv) proposed total acreage that will be treated with Department-specific best management practices by the compliance deadline. The Department shall clearly state whether the implementation schedule will be sufficient to meet the Department's waste load allocation interim and final deadlines.

*D5.14.3 Los Penasquitos Lagoon Sediment*

Monitoring shall be implemented and reported according to the requirements in Attachment F of this Order.

The Department shall meet its sediment load reduction and tidal and non-tidal salt marsh restoration by participation in cooperative watershed agreements or by Department-specific implementation.

In addition to the tidal and non-tidal salt marsh restoration efforts, the Department's required sediment load reduction is 48 tons per wet season by the final TMDL compliance date of December 31, 2034.

For Los Penasquitos Lagoon best management practices implementation, the Department shall implement one of the options listed below:

1. The Department shall participate in cooperative agreements with local agencies, regional agencies, or private entities to ensure successful restoration of 80 percent of the 1973 acreage of tidal and non-tidal lagoon salt marsh (346 acres) in the Los Penasquitos Lagoon, or
2. The Department shall demonstrate through best management practices implementation (e.g., structural or institutional practices) that its best management practices contribute to tidal and non-tidal salt marsh restoration and that the Department has met the 48 tons per wet season proportional responsibility for the sediment load reduction through:
  - a. Submittal of a work plan with the TMDL Compliance Plan (required in section D3.3, above). The work plan shall identify and list existing, proposed, and in-progress best management practices in the Los Penasquitos Watershed used to meet the Department's required sediment load reduction. For each best management practices, the list must include the best management practice type, the location (e.g., longitude and latitude), the date of implementation, frequency of maintenance, date of last maintenance, functional design criteria (i.e., volume, flow rate, etc.), and amount of sediment captured.
  - b. The Department may implement treatment controls within the Department's right-of-way or in areas managed by municipalities, local agencies, or private entities to which runoff from the Department's right-of-way is discharged.
3. The Department may utilize a combination of methods in D5.14.3, items 1 or 2, above.

**D6 Tables with TMDLs and Corresponding Requirements**

The following three sections provide an overview and lists of the compliance requirements for each of TMDLs for which the Department is responsible.

**D6.1 No TMDL-Specific Requirements for TMDL Compliance**

For the TMDLs listed in Table D-1, the Department shall comply with this Order and the reporting requirements listed in Table D-1 for each corresponding TMDL. For a TMDL listed in Table D-1, if the Department meets the requirements in this Order and the reporting requirements listed in Table D-1, then the Department is in compliance with that TMDL.

**Table D-1. Comply with this Order and the Specific Reporting Requirements in this Attachment**

Regional Water Quality Control Board	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirement in Attachment D
North Coast	Klamath River in California (shared TMDL)	Nutrients, microcystin, and dissolved oxygen	D3.2
North Coast	Shasta River (shared TMDL)	Dissolved oxygen	D3.2
North Coast	Scott River	Sediment and Temperature	D3.2
San Francisco Bay	Guadalupe River Watershed	Mercury	D3.2
San Francisco Bay	Napa River	Sediment	D3.2
San Francisco Bay	Pescadero-Butano Watershed	Fine sediment	D3.1 and D3.2
San Francisco Bay	Richardson Bay (shared TMDL)	Pathogens	D3.2
San Francisco Bay	San Francisco Bay Urban Creeks	Diazinon and pesticide toxicity	D3.2
San Francisco Bay	San Pedro Creek and Pacifica State Beach (shared TMDL)	Bacteria	D3.2
San Francisco Bay	Sonoma Creek	Sediment	D3.2
Central Coast	Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) (shared TMDL)	Sediment	D3.2

Regional Water Quality Control Board	TMDL Impaired Waterbody	TMDL Pollutant	Specific Reporting Requirement in Attachment D
Los Angeles	Upper Santa Clara River	Chloride	D3.2
Los Angeles	Santa Clara River Reach 3	Chloride	D3.2
Santa Ana	San Diego Creek and Upper Newport Bay (shared TMDL)	Cadmium	D3.2

#### **D6.2 Comply with this Order and the Reporting and Implementation Requirements in Attachment D**

The TMDLs in Table D-2 require additional TMDL-specific implementation requirements above and beyond complying with the baseline requirements of this Order. These TMDLs require compliance with this Order and the Specified Reporting and Implementation Requirements listed in Table D-2.

**Table D-2. Comply with this Order and the Specified Reporting and Implementation Requirements in this Attachment**

Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Reporting and Implementation Requirements in Attachment D
North Coast	Scott River	Sediment and Temperature	D3.2, D5.7 – D5.7.1.2
San Francisco Bay	Petaluma River	Fecal indicator bacteria	D3.1, D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.5
San Francisco Bay	San Francisco Bay (shared TMDL)	Mercury	D3.2, D3.3, D3.4, D5.3 D5, D5.1, D5.2, and D5.8.2
San Francisco Bay	San Francisco Bay (shared TMDL)	Polychlorinated biphenyls	D3.2, D3.3, D3.4, D5, D5.1, D5.2, D5.4, and D5.8.1
Central Coast	San Lorenzo River (includes Carbonera, Lompico, and Shingle Mill Creeks) (shared TMDL)	Sediment	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.3
Central Valley	Clear Lake	Nutrients	D3.2

Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Reporting and Implementation Requirements in Attachment D
Los Angeles	Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (shared TMDL)	Toxic Pollutants: Metals (copper, lead, zinc), dichloro-diphenyl-trichloroethane, polynuclear aromatic hydrocarbons, and polychlorinated biphenyls	D3.2, D3.3, D3.4, D5, D5.1, D5.2, D5.4 and D5.10
Los Angeles	Los Angeles River Watershed (shared TMDL)	Bacteria	D3.2, D3.3, D3.4, D5, D5.1, D5.2, D5.6 and D5.10
Los Angeles	San Gabriel River, Estuary and Tributaries (shared TMDL)	Indicator bacteria	D3.1, D3.2, D3.3, D3.4, D5, D5.1, D5.2, D5.5 and D5.10
Central Valley	Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch (shared TMDL)	Mercury	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.11.1
Central Valley	Sacramento - San Joaquin River Delta Estuary (shared TMDL)	Methylmercury	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.11
Lahontan	Middle Truckee River Watershed (shared TMDL)	Sediment	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.3
Lahontan	Lake Tahoe	Sediment and nutrients	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.12
Colorado River	Coachella Valley Stormwater Channel	Bacterial Indicators	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.5
Santa Ana	Rhine Channel Area of the Lower Newport Bay	Chromium and mercury	D3.2, D3.3, D3.4, D5, D5.1, D5.2, D5.3 and D5.4
Santa Ana	Rhine Channel	Metals (copper, lead, and zinc)	D3.2, D3.3, D3.4, D5, D5.1, D5.2, D5.4
Santa Ana	San Diego Creek and Newport Bay	Copper	D3.2, D3.3, D3.4, D5, D5.1, D5.2, D5.4
San Diego	Rainbow Creek	Total nitrogen and total phosphorus	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.3

Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Reporting and Implementation Requirements in Attachment D
San Diego	Chollas Creek (shared TMDL)	Dissolved copper, lead, and zinc	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.14.2
San Diego	Los Peñasquitos Lagoon (shared TMDL)	Sediment	D3.1, D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.14.3
San Diego	Project I - Revised Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)	Indicator bacteria	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.14.1

### D6.3 Total Maximum Daily Loads that Require Additional Time to Achieve Compliance

The TMDLs in Table D-3 may require more time to achieve compliance, so the implementation requirements are addressed both in this Attachment as well as an associated Time Schedule Order designed to give the Department adequate time where it may be necessary to come into compliance with past or near-future TMDL compliance deadlines.

**Table D-3. Comply with Time Schedule Order 202X-XXXX-DWQ and Specified Implementation Requirements of this Attachment**

Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Implementation Requirements of Attachment D
North Coast	Albion River	Sediment	D5, D5.1, D5.2, and D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Big River	Sediment	D5, D5.1, D5.2, and D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Lower Eel River (shared TMDL)	Temperature and sediment	D5, D5.1, D5.2, D5.6, and D5.7 – D5.7.5
North Coast	Middle Fork Eel River	Temperature and sediment	D5, D5.1, D5.2, D5.6 and D5.7 – D5.7.5
North Coast	South Fork Eel River	Temperature and Sediment	D5, D5.1, D5.2, D5.6, and D5.7 – D5.7.5



Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Implementation Requirements of Attachment D
North Coast	Upper Main Eel River and tributaries including Tomki Creek, Outlet Creek, and Lake Pillsbury	Temperature and sediment	D5, D5.1, D5.2, D5.6 and D5.7 – D5.7.5
North Coast	Garcia River (shared TMDL)	Sediment	D5, D5.1, D5.2, D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Gualala River (shared TMDL)	Sediment	D5, D5.1, D5.2, D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Klamath River in California (shared TMDL)	Temperature	D5, D5.1, D5.2, D5.6 and D5.7 – D5.7.5 (except D5.7.1.1)
North Coast	Lost River	Nitrogen, biochemical oxygen demand, and pH	D5, D5.1, D5.2, D5.3
North Coast	Mad River (shared TMDL)	Sediment and Turbidity	D5, D5.1, D5.2, D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Navarro River (shared TMDL)	Sediment and temperature	D5, D5.1, D5.2, D5.6 and D5.7 – D5.7.5
North Coast	Noyo River (shared TMDL)	Sediment	D5, D5.1, D5.2, and D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Redwood Creek (shared TMDL)	Sediment	D5, D5.1, D5.2, and D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Shasta River (shared TMDL)	Temperature	D5, D5.1, D5.2, and D5.6 and D5.7 – D5.7.5 (except D5.7.1.1)
North Coast	Ten Mile River	Sediment	D5, D5.1, D5.2, and D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Trinity River	Sediment	D5, D5.1, D5.2, and D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	South Fork Trinity River and Hayfork Creek	Sediment	D5, D5.1, D5.2, and D5.7 – D5.7.5 (except D5.7.1.2)
North Coast	Van Duzen River and Yager Creek	Sediment	D5, D5.1, D5.2, and D5.7 – D5.7.5 (except D5.7.1.2)
Los Angeles	Ballona Creek	Metals (silver, cadmium,	D5, D5.1, D5.2, and

Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Implementation Requirements of Attachment D
		copper, lead, and zinc)	D5.4
Los Angeles	Ballona Creek	Trash	D5, D5.1, D5.2, and 5.9
Los Angeles	Ballona Creek, Ballona Estuary, and Sepulveda Channel (shared TMDL)	Bacteria	D5, D5.1, D5.2, D5.5, and D5.10
Los Angeles	Ballona Creek Estuary	Toxic pollutants: silver, cadmium, copper, lead, zinc, chlordane, polychlorinated biphenyls, polyaromatic hydrocarbons, and dichloro-diphenyl-trichloroethane	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Ballona Creek Wetlands (shared TMDL)	Sediment and invasive exotic vegetation	D5, D5.1, D5.2, D5.3, and D5.10
Los Angeles	Calleguas Creeks and its Tributaries and Mugu Lagoon (shared TMDL)	Metals and selenium	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Calleguas Creeks, its Tributaries and Mugu Lagoon	Organochlorine pesticides, polychlorinated biphenyls, and siltation	D5, D5.1, D5.4, and D5.10
Los Angeles	Colorado Lagoon (shared TMDL)	Organochlorine pesticides, polychlorinated biphenyls, sediment toxicity, polynuclear aromatic hydrocarbons, and metals	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Los Angeles Area Lakes, Echo Park Lake	Trash	D5, D5.1, D5.2, 5.9, and D5.10
Los Angeles	Los Angeles Area Lakes, Echo Park Lake	Nitrogen and phosphorus,	D5, D5.1, D5.2, D5.3, and D5.10
Los Angeles	Los Angeles Area Lakes, Echo Park Lake	Chlordane, dieldrin, and polychlorinated biphenyls	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Los Angeles Area Lakes, Legg Lake	Trash	D5, D5.1, D5.2, 5.9, and D5.10
Los Angeles	Los Angeles Area	Mercury	D5, D5.1, D5.2, D5.4,

Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Implementation Requirements of Attachment D
	Lakes, Lake Sherwood		and D5.10
Los Angeles	Los Angeles Area Lakes, North, Center and Legg Lake	Nitrogen and phosphorus	D5, D5.1, D5.2, D5.3, and D5.10
Los Angeles	Los Angeles Area Lakes, North, Center, and Legg Lake	Chlordane, dichloro-diphenyl-trichloroethane, dieldrin, polychlorinated biphenyls	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Los Angeles Area Lakes, Peck Road Park Lake	Nitrogen and phosphorus	D5, D5.1, D5.2, D5.3, and D5.10
Los Angeles	Los Angeles Area Lakes, Peck Road Park Lake	Chlordane, dichloro-diphenyl-trichloroethane, dieldrin, polychlorinated biphenyls	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Los Angeles Area Lakes, Peck Road Park Lake	Trash	D5, D5.1, D5.2, D5.9, and D5.10
Los Angeles	Los Angeles Area Lakes, Puddingstone Reservoir	Nitrogen and phosphorous	D5, D5.1, D5.2, D5.3, and D5.10
Los Angeles	Los Angeles Area Lakes, Puddingstone Reservoir	dichloro-diphenyl-trichloroethane, polychlorinated biphenyls, chlordane, mercury, dieldrin	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Los Angeles River	Trash	D5, D5.1, D5.2, D5.9, and D5.10
Los Angeles	Los Angeles River and Tributaries	Metals	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Los Cerritos Channel	Metals	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Machado Lake	Eutrophic algae, ammonia, and odors	D5, D5.1, D5.2, D5.3, and D5.10
Los Angeles	Machado Lake (shared TMDL)	Pesticides and polychlorinated biphenyls	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Machado Lake	Trash	D5, D5.1, D5.2, and D5.9

Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Implementation Requirements of Attachment D
Los Angeles	Malibu Creek and Lagoon	Sedimentation and nutrients	D5, D5.1, D5.2, D5.3, and D5.6,
Los Angeles	Malibu Creek Watershed	Bacteria	D5, D5.1, D5.2, D5.5, and D5.10
Los Angeles	Malibu Creek Watershed	Trash	D5, D5.1, D5.2, 5.9, and D5.10
Los Angeles	Marina del Rey Harbor	Toxic pollutants: copper, lead, zinc, chlordane and total polychlorinated biphenyls	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Marina del Rey Harbor, Mothers' Beach, and Back Basins	Bacteria	D5, D5.1, D5.2, D5.5, and D5.10
Los Angeles	Revolon Slough and Beardsley Wash	Trash	D5, D5.1, D5.2, 5.9, and D5.10
Los Angeles	Santa Clara River Estuary and Reaches 3,5,6,7	Indicator bacteria	D5, D5.1, D5.2, D5.5, and D5.10
Los Angeles	San Gabriel River Estuary and Impaired Tributaries	Metals (copper, lead, zinc) and selenium	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Santa Monica Bay	dichloro-diphenyl-trichloroethane and polychlorinated biphenyls	D5, D5.1, D5.2, D5.4, and D5.10
Los Angeles	Santa Monica Bay Beaches (shared TMDL)	Bacteria	D5, D5.1, D5.2, D5.5, and D5.10
Los Angeles	Santa Monica Bay Nearshore and Offshore	Debris (trash and plastic pellets)	D5, D5.1, D5.2, D5.9, and D5.10
Los Angeles	Ventura River Estuary	Trash	D5, D5.1, D5.2, D5.9, and D5.10
Los Angeles	Ventura River and its Tributaries	Algae, eutrophic conditions, and nutrients	D5, D5.1, D5.2, D5.3, and D5.10
Santa Ana	Lake Elsinore and Canyon Lake	Nutrients	D5, D5.1, D5.2, D5.3, and D5.10
Santa Ana	Big Bear Lake	Nutrients	D5, D5.1, D5.2, and D5.3
Santa Ana	San Diego Creek	Organochlorine	D3.2, D3.3, D3.4, D5,

Regional Water Board	Impaired Waterbody	Pollutant Category	Specified Implementation Requirements of Attachment D
	Watershed	compounds: dichloro-diphenyl-trichloroethane, chlordane, polychlorinated biphenyls, and toxaphene	D5.1, D5.2, and D5.4
Santa Ana	Upper and Lower Newport Bay	Organochlorine compounds: dichloro-diphenyl-trichloroethane, polychlorinated biphenyls, and chlordane	D3.2, D3.3, D3.4, D5, D5.1, D5.2, and D5.4